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MEDITERRANEAN THEATER OF OPERATIONS
UNITED STATES ARMY
Office of the Surgeon
APO 512

ARMY
MEDICAL

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CIRCULAR LETTER NO. 18

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I - NOTES ON CERTAIN TROPICAL DISEASES

The following discussion upon the subjects of Scrub Typhus, Dengue, Filariasis and Schistosomiasis is furnished for the information of medical officers and should be used in training programs.

1. Scrub Typhus (Mite Typhus, Tsutsugamushi, Japanese River Fever). Reference should be made to Stitts' Tropical Diseases, Strong, 6th Edition, Volume II, page 975.

a. Definition. An acute febrile disease caused by Rickettsia orientalis, which is transferred to man by the bite of infected larval kedani mites (Trombicula Akamusi). The disease varies in its severity and its onset is characterized by headache, fever, a lymphadenopathy regional to the bite, a generalized macular rash which appears about a week after fever is noted, tachycardia, occasional eye ground changes, a fall of fever by lysis, and a prolonged convalescence. Significant changes in the electrocardiogram may be noted in the course of the disease and the serum from patients, while causing an agglutination of proteus, strain OXK, does not affect Proteus, strains OX2 or OX19, thus providing a laboratory method for differentiating between Scrub Typhus and Typhus or Spotted Fever. The case fatality rate from Scrub Typhus is around seven per cent in the white race.

b. Epidemiology. The reservoir of this infection exists in wild rodents, and the mite when once infected remains so indefinitely and transmits the infection through its subsequent generations. The infection of humans takes place as the result of the need by the larval mite of a blood meal, in order that it may affect its metamorphosis. Adult mites and nymphs feed only on plants and hence do not act as vectors of the disease. The mites are found in scrub and kunai grass, in hemp fields, etc.; and especially near rivers. The disease is probably endemic over all of Southeast Asia including the Dutch East Indies, Borneo, New Guinea, the Philippines, Formosa and certain of the Japanese Islands including Honshu.

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c. Treatment. There is no specific treatment for the disease. The following routine must be followed:

(1) Strict bed rest is absolutely necessary.

(2) Adequate nursing care must be made available to all patients suffering from Scrub Typhus.

(3) The diet should be light and appetizing. Sandwiches, iced fruit juices, chocolate milk, egg nogs, etc., should be offered at frequent intervals.

(4) The fluid intake should be maintained at 3000 cc per day when dehydration is present.

(5) Codeine, aspirin and ice bags should be used for the control of headache.

(6) Paraldehyde by rectum, in doses of 20 to 30 cc, has been reported as being satisfactory for the control of delirious or agitated patients.

(7) Special care should be given to the mouths of all patients suffering from Scrub Typhus.

(8) Digitalis is considered valueless for the treatment of cardiac disturbances arising in the course of Scrub Typhus.

d. Management of Convalescence. This is most important in order to evaluate the physical condition of the patient and to prevent the development of cardiac neuroses.

(1) During the period of illness or convalescence the medical officer will not either by talk or action, focus the patient's attention upon his disease.

(2) Patients should be given latrine facilities on an average of 5 to 7 days after the patient's temperature is normal. He should be gotten into the mess line about 10 days after defervescence of the fever has taken place.

(3) Physical rehabilitation should then be started using a modified exercise tolerance test and the patient's activities in this test should be controlled by his general reaction to exercise, the sedimentation rate and the eye ground changes. An average of 21 days is required to rehabilitate a patient who has had Scrub Typhus.

e. The Control of Scrub Typhus. This is based upon the elimination of the mites and the protection of the individual from larval mite bites.

(1) Camp sites should be surveyed and the relative mite infestation determined. If a high rate is present the camp site should not be used.

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(2) All scrub and kunai grass in an organization area should be cleared and burned and the area sprayed with crude or diesel oil.

(3) Personnel engaged in control work must be provided with anti-mite impregnated clothing and must use the dimethylphthalate insect repellent upon all exposed areas.

(4) When individuals are in mite infested areas, anti-mite impregnated clothing will be worn at all times, trousers will be tucked into the tops of shoes, impregnated sheets and blankets will be used and the dimethylphthalate repellent will be used on exposed skin surfaces.

(5) The success of all these measures depends upon command responsibility and a strict anti-mite discipline must be established to protect personnel.

2. Dengue (Break-bone Fever). Reference should be made to Stitts' Tropical Diseases, Strong, 6th Edition, Volume II, page 905.

a. Medical officers in this theater have had experience in the diagnosis of sandfly fever. Dengue fever is clinically indistinguishable from sandfly fever unless the typical saddle-back temperature curve is present, or the macular rash, characteristically occurring at the time of the intermission of fever, or at the accession of terminal fever, makes its appearance. Do not diagnose dengue as "influenza" or "FUO". This disease is transmitted by culicine mosquitoes with *Aedes Aegypti* being the chief vector. Hence the control of dengue is a question of culicine mosquito control.

3. Filariasis. Reference should be made to Stitts' Tropical Diseases, Strong, 6th Edition, Volume II, page 1294.

a. In a study of 737 patients diagnosed as having filariasis, which was made by Frank R. Smith, Jr., (Naval Medical Bulletin, Vol. 44, No. 4, April, 1945, page 719) the conclusion was reached that a diagnosis of filariasis is tenable if the following findings are present:

(1) A centrifugal or retrograde lymphangitis, with or without an erythematous rash.

(2) A tender, satellite gland which is smaller and firmer than that accompanying a pyogenic infection.

(3) A temporary firm edema, increased by exercise and diminished by rest.

(4) Fullness of the forearm, most pronounced in the volar aspect, with superficial veins less visible.

(5) A palpable cord-like fullness along a lymph channel.

(6) Fullness and tenderness of the spermatic cord and epididymis.

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- (7) Regional lymphadenopathy, often symmetrical aberrant lymph nodes.
- (8) The history of duty in endemic area.

b. Frequently found secondary symptoms are:

- (1) Irritability.
- (2) Excessive fatigue.
- (3) Muscle pains and soreness which are increased by exercise.
- (4) Loss of libido.

c. It is most important to reassure patients in whom the diagnosis of filariasis has been made, that the possibility of their developing a permanent loss of libido or gross deformities of the genitalia or limbs is extremely rare. It must be remembered that patients coming from endemic areas have witnessed grotesque cases in natives, which have resulted from repeated infections over long periods of time, and that as a result of their observations they are prone to develop marked neurotic tendencies. Every effort should be made by rationalization to abort the development of neuroses in these patients.

4. Schistosomiasis. Reference should be made to Stitts' Tropical Diseases, Strong, 6th Edition, Volume II, page 1396.

a. Certain medical officers in this theater are familiar with genito-urinary schistosomiasis because a few cases have been reported among American personnel who were stationed at one time or another in Tunisia. Schistosomiasis produced by *Schistosoma Mansoni* has not been reported in American troops in MTOUSA. This disease is widespread over Africa and occurs in South and Central America and the West Indies. Schistosomiasis produced by *Schistosoma Japonicum* is common in the Philippines (Leyte, Samar and Mindanao), the Celebes, Japan, the Yangtse Basin in China, the North River near Canton, Foochow and on the Burmese border. With foci as far apart as these being described, it is likely that the disease is endemic in many parts of Southeast Asia.

b. It is important to remember that the disease is spread to man by direct contact with water infested with the cercariae of the *Schistosoma*, hence the prevention of this disease consists of keeping out of contact with raw fresh water in endemic areas.

- (1) Bathing in raw water is to be prohibited.
- (2) Washing of clothes or vehicles in raw water is dangerous.
- (3) The use of raw water for drinking is dangerous.
- (4) Every effort should be made to sterilize the stools of patients ill with this disease in order to prevent its spread.

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(5) Every means of exercising strict water discipline should be brought into effect.

II - CHANGES IN THE ARMY SERVICE FORCES MEDICAL SUPPLY CATALOG

1. Pending receipt of the next published changes to the Army Service Forces Medical Supply Catalog, the following items of equipment have been authorized by the War Department for issue as indicated:

a. Add the following items to Item 9502200, Chest Dental, Pack, A, Complete:

5246500	Elevator, Stout, A	1
5319000	Forceps, Tooth-extracting, No. 18R	1
5320000	Forceps, Tooth-extracting, No. 18L	1
5326200	Forceps, Tooth-extracting, No. 215	1
5436000	Plugger, amalgam, Black, No. 1	1
5437000	plugger, amalgam, Black, No. 3	1
5523200	Retainer, matrix, No. 9	1

b. Add the following items to Item 9502300, Chest, Dental, Pack, B, Complete:

5002500	Alloy-mercury measuring device	1
9928500	Hone, Oil, Small	1

c. Add the following items to Item 9502500, Chest, Dental, No. 60, Complete:

5002500	Alloy-mercury measuring device	1
5523200	Retainer, Matrix, No. 9	1

For the SURGEON:

E. Standlee
 E. STANDLEE;
 Colonel, MC,
 Deputy Surgeon.

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